

EXPERT REPORT
DR. JOSEPH VILSECK
RE: Kristensen v. Spotnitz, Case No. 3:09-cv-00085
U.S Federal District Court, Charlottesville, Virginia

My name is Joseph Vilseck, Jr., PhD, M.D. I am a board certified internal medicine physician and my subspecialty is allergy, immunology and pulmonary medicine for which I am board certified in the field of allergy and immunology. My resume and list of trial depositions as an expert witness are enclosed. I have a private practice and have been in clinical practice in Virginia for 40 years. Currently, I have offices in Richmond, Virginia and Tappahannock, Virginia. My principle, clinical office location is Virginia Allergy and Asthma Institute, 7702 East Parham Road, Suite 301, Richmond, VA 23294, phone 804 527-1190. I am compensated in the amount of \$300/hr for expert evaluations, my deposition rate is \$350/hr, and my trial appearance fee is \$750/hr.

I have taught medical, dental and medical technology students and was in charge of the Adult Allergy and Immunology Department at West Virginia University School of Medicine. I was a National Institute of Health Fellow at Duke University, where I conducted research and taught. I also earned a Master of Science and Doctor of Philosophy degrees in Medical Microbiology.

Since the 1970's, my clinical practice has included evaluation of mold exposure cases, and since that time, I have cared for and continue to care for hundreds of patients from mold-infested homes and office buildings. I have also consulted for the County of Henrico School System, the County of Hanover School System, the Department of Motor

Vehicles, headquartered in Richmond, VA, the Monroe Building, Richmond, VA, and the West Virginia University Medical Hospital. I have been admitted in both federal and state courts as an expert in mold allergy and immunology.

In this case, I have not examined the two children, but, I did examine and treat the parents, Susan and Stein Kristensen. The two children, Alex and Kaia, were seen by my colleague, Dr. Blumberg, when we were both at Virginia Adult and Pediatric Asthma Associates in Richmond, VA

I have reviewed the extensive treating medical records for the two children, including those of: Doctor Frye, a family physician who saw them soon after the home exposures; Dr. Dorr Dearborne, a well-known specialist at the Cincinnati Children's Hospital; Dr. Ritchie Shoemaker, who did mold testing on the children; Dr. David Reynolds; Dr. Gary Rakes; and Dr. Blumberg. During the review and examinations of the parents, I had the opportunity to review the photos, mold testing, discovery and depositions in the underlying case. I also spoke with the parents regarding the children's situation at the time.

The children's cases represent classic allergic responses to mold and mold volatile organic compounds (VOC's). First, we have a damp indoor space, a term that is used and applied by the Institute of Medicine of National Academics, Damp Indoor Spaces and Health (2004), that is, a residential structure which has experienced repeated and frequent water intrusion events p.32. In this case, the water came from ceiling and roof leaks

associated with skylights that the owner knew were leaking but never fixed. There is ample evidence that these leaks had occurred for years and the photos and investigative reports show long-term water damage and water staining.

When these kinds of long-term water intrusion events occur, mold growth happens inside the living spaces on walls, interior cavities, floors, etc. Damp Indoor Spaces, p. 32-35, p. 4. It is well recognized that “moisture control is the key to mold control.” Environmental Protection Agency, Mold Remediation in Schools and Commercial Buildings (EPA), 2001, p. 39. Mold is an allergen, and mold growths cause allergic responses, even in small amounts, and an exposure to a simple mold or several mold spores can cause an insensitive person to become sensitized to molds. EPA, p 17, 40.

Although most molds can cause medical problems in certain circumstances, several genus of mold are especially associated with damp, indoor space conditions. Three molds that are indicators of a damp indoors and that can cause medical symptoms and signs are Aspergillus, Penicillium, and Stachybotrys. All were found in this home. Both the U.S. Centers for Disease Control (COOC), Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods, p.7, and the World Health Organization, Guidelines for Indoor Air Quality, 209 (WHO), p. 12, 14, recognize these molds as problematic and indicative of damp indoors.

Susan and Stein Kristensen reported significant musty odors in the home. The odors were so serious that a guest in their home urged them to test for mold. All molds produce

VOCs which cause musty odors and are detected by the human nose at levels below normal analytical detection. Damp Indoor Spaces, p.69, 165. Mold VOCs have been established to be irritants to the upper respiratory tract and are one of the primary reasons that both the National Institute of Medicine and WHO found a sufficient association between upper respiratory problems and damp indoor spaces. Molds may also cause serious allergic reactions, and are often, as with these children, expressed as upper respiratory symptoms: runny nose, watery eyes, sore throat, cough, and sinus pressure with headaches.

There are four important factors in mold-exposure causation, and the ruling out of other factors. First is the typical Immunoglobulin E (IgE) mediated allergy reaction, and with/history and physical examination plus laboratory findings can be immediately linked to mold allergy response. "Mold exposure can cause irritation of the eyes, skin, nose, throat and lungs, and sometimes can cause a burning sensation in these areas." EPA, jp.41. During the same patient evaluation, other possible causes such as inflamed tonsils, strep throat, and acute infectious bronchitis plus other skin diseases and sources of other noxious agents or other allergic causes can be ruled out, as here. The allergic symptoms found by the treating physicians in this case are completely consistent with mold and VOC exposure and confirm the "upper respiratory" nature of their illness as described in Damp Indoor Spaces.

Second, there is contemporaneous illness among all four family members in the same house at roughly the same time. Although such contemporaneous timing is not itself

proof of causation, such multiple building inhabitants' contemporaneous illness is a hallmark of early diagnosis in damp indoor space conditions. Since inhalation is the primary means of mold exposure, contemporaneous illness is consistent with such simultaneous exposures.

The third factor is the type of genus of mold or molds, as already discussed, which are consistent with damp indoor spaces and consistent with all the literature on mold types known to cause serious human illness.

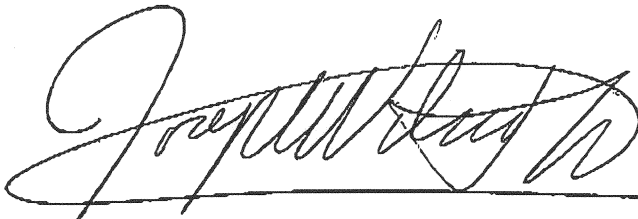
The fourth factor, which is obviously very significant, is exposure. The Kristensen children, along with their parents, resided in the damp indoor space conditions for months. Kaia was less so, but was exposed as an infant, an especially vulnerable time for these kinds of irritants, especially the vulnerability of contracting asthma for several years after the mold exposure. This long-term exposure to the molds and the mold VOCs exceeds any boundaries of testing under government standards, which simply are not applicable to this kind of exposure timing. Further, as in most damp, indoor spaces, there was exposure to a mixture of molds (several types) and VOCs, and there is no governmental standard, nor will there ever be, for this kind of mold/VOC mixture. WHO, p.85. Any of the three molds, individually, could cause the upper respiratory responses; however in this case, all three molds mentioned before were present in the home, collectively causing the children and/or family's illnesses.

Both children have improved after leaving the home to the extent they no longer need medical care for these illnesses derived from their exposure to the mold VOCs, but could develop mold allergic reactions in the future. This is consistent with a purely allergic and especially irritant exposure, which occurred here.

I have considered other possible causes and ruled them out. Because of their ages, neither smoking nor alcohol use are issues. The medical records reflect no chronic disease at the time, nor currently. Alex does have significant psychological problems but they occurred after the family problems developed with leaving the home, losing their belongings and subsequent family stresses. Both children were diagnosed with upper respiratory and allergic responses by multiple physicians, all acting independently. The children did not test positive for many molds, but this is not unusual given their ages, during which they still maintained some parental immunities. Skin testing for allergies in infancy is difficult and the skin testing done at the time is just not reliable.

In summary, I conclude that Kaia and Alexander Kristensen suffered an upper respiratory and allergic response to mold and especially VOCs in the damp indoor space that compromised their home at 560 Blumfield Road. My conclusions are consistent with the well-established scientific and medical literature cited herein, as well as the following additional documents upon which I rely for this opinion: Hope and Simon, Excell Dampness and Mold Growth in Homes, An Evidence-Based Review of the Aeroirritant Effect and Its Potential Causes, Allergy and Asthma Proceedings, Volume 28 No. 3, 262-270 (2007).

I render these opinions to a degree of medical certainty and more likely than not in my professional field.

A handwritten signature in cursive script, appearing to read "Joseph R. Vilseck, Jr.", written in black ink.

Doctor Joseph R. Vilseck, Jr.